Campbell 2ed
(1-18)

21st December
1879.

This seems to be a
muddle of brains worked
at Oxford or Cambridge
mathematically, and
theologically, and
astronomically
I can make neither
head nor tail of it
It seems to have no
aim or object or
meaning or end
I have seen the Egyptian
astronomical sculptures and
this has nothing to do with
them

1 St Hildas Terrace
Whitby
November 10th 1879

Sir

In Good Words of last month I read your Paper on the Sun Dial now I take the liberty of directing your attension to an old one in the British Museum My late Father consulted many learned friends on the subject of the gnomon but they never got nearer your plain than a glass marble shaped which in this country did not answer —

Judah, Ezek. iv. 6, with the words "at the end of 40 years," Ezek. xxix. 13, compared with Rev. xi. 8, in illustration of "*the family of Egypt*," Zech. xiv. 18.

The same prediction is stated *negatively* in Hosea xi. 5, illustrated by Isaiah vii. 8, for the Kingdom of Israel which preceded the Babylonian captivity; also with more extended reference to the ultimate destruction of their City and Sanctuary sooner than allow them to become those of an idolatrous people, *one with the heathen in all lands*, Ezek. xx. 32—86, characterized aptly,—as "*the wilderness of the*

By Book Post I send a few odd leaves left after the Book was sent off (I sold it unpublished as it will direct you to find the stone I mean in the B. Museum

Professor P Smyth expected to find some measure of time in the Pyramid but failed - It is a subject I do not understand and therefore may be mistaken in thinking the scraps I send worth your acceptance - I am

yours Truly

Frances A Hewson

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THE ORDINANCES FOR THE HOLY OBLATION IN THE TYPICAL PROPHECY OF EZEKIEL'S VISION,

ILLUSTRATED FROM THE TYPICAL STRUCTURE OF THE GREEK-EGYPTIAN HOLLOW DIAL WITH *SEVEN* STEPS.

The Greek-Egyptian Dial with *seven* steps will, if I am not greatly mistaken, be numbered amongst the most valuable relics of Oriental antiquity in the British Museum. It was found A. D. 1852, at the base of the Obelisk called *Cleopatra's Needle at Alexandria*, by John Scott Tucker, Esq., who brought it to England, and presented it to the British Museum.

The Greek-Egyptian Kingdom was that of the Ptolemies, and represented that of the ancient SUN-PHARAOHS of Egypt, under circumstances to verify the prediction of Deut. xxviii. 68, that in the latter days, (i. e., of the Mosaic or typical Dispensation) Israel should be brought a *second* time under bondage to Egypt. The references of the latter-day prophets to this event are twofold. In Ezek. iv. 13; xxix. 13—17: Hosea viii. 13; ix. 3, the fact is predicted in *positive* terms, and with a remarkable association of the 40 days of years for Judah, Ezek. iv. 6, with the words "at the end of 40 years," Ezek. xxix. 13, compared with Rev. xi. 8, in illustration of "*the family of Egypt*," Zech. xiv. 18.

The same prediction is stated *negatively* in Hosea xi. 5, illustrated by Isaiah vii. 8, for the Kingdom of Israel which preceded the Babylonian captivity; also with more extended reference to the ultimate destruction of their City and Sanctuary sooner than allow them to become those of an idolatrous people, *one with the heathen in all lands*, Ezek. xx. 32—86, characterized aptly,—as "*the wilderness of the* *people.*" Compare Dan. xi. 14, for the desolations of Israel, when following after false Messiahs.

Daniel's vision, cap. vii, respecting the four great Kingdoms of Heathen Dominion, from the times of Nebuchadnezzar to those of Messiah's day, identifies *the consummation of the vision of ancient Jewish Prophecy* (Habakkuk ii. 3) with the breaking up of this Greek-Egytian kingdom of Alexander's successors.

Its identity with Syria and Egypt,—the North and the South of Dan. xi, (comparing Isaiah xix. 23—25, with Hosea ix. 3) affords a *threefold* illustration of the breaking up, viz.—1st. As by subjection of the two heathen Kingdoms to that of Rome. 2nd. By the visitation of Jerusalem for the Apostacy in the days of Antiochus Epiphanes. 3rd. By Jerusalem's final judgment, when rejecting Christ for its Messiah. Rev. xi. 8.

But that event was to characterize the times when God should revoke his typical covenant with Israel by the Mosaic law, to establish his new and eternal covenant with all flesh in Christ, as the spiritual seed of Abraham represented by an election of grace in the then Israel according to the flesh. Dan. vii, ; ix. 26, 27 : Jerem. xvi. 14, 15.

This was done by the events of the Apostolic age, which followed close upon the breaking up of the latter-day Kingdom of the Ptolemies. For then the Anti-Christian Apostacy of the Jewish Church *at Jerusalem,* (or in the "*pleasant land*" Dan. viii. 9 ; xi. 41) and throughout the dispersions of Israel in all lands, began to develope itself under protection from the dominant power of heathen Rome, Acts iv. 27, on the cessation of the wars between the North and the South. The pre-existing kingdoms of the North and the South were the Greek-Syrian and Greek-Egyptian Kingdoms, combined with the Jews of Jerusalem, and in all lands from the days of Alexander the Great. I am inclined, moreover, to suspect a typical allusion to the North and the South. For the Egyptians date their THOTH, or beginning of typical time *Southward* from the *full* moon in Capricorn. But the Assyrians made the SOTHIS or *end* of typical time with the Egyptians, the beginning for themselves—as reckoning *Northward* from the *New* Moon in Cancer, or Leo.

Thus it is by no wayward fancy of my own that I claim here to have traced a typical connection between the structure of the Greek-Egyptian Dial with steps, of the era of the Ptolemies, and the latter-day typical ordinances for the holy oblation of Ezekiel's prophetic vision.

That the facts of Jewish traditional history were subjected to a revised Chronological arrangement in the days of Ptolemy, Philadelphus, (or *circ.* B. C. 284) to bring them into better harmony with those of their Gentile neighbours, is the record of Josephus. Antiq. lib. xii., cap. ii. 3.

It is, moreover, corroborated by the fact that the then translation of the Hebrew Scriptures into Greek (which is called the Septuagint version, as the work of 70 chosen scholars) did alter in details the Chronology of the old Hebrew Scriptures, respecting the lives of the Patriarchs, both Antediluvian and Postdiluvian.

When considering what is meant by the right and left hand of Jewish typical prophecy, we ought not to omit comparing the *left* side as laid to the iniquity of *Israel*, for 390 days, and the *right* side to that of *Judah*, for 40 days,—in Ezek. iv. 4—7,—with the vision of the "*living*" or "*running waters*," of cap. xlvii. 1—6. For these "issued out from under the threshold of the house Eastward:" (as from the North gate by the holy chambers of the Priests, xlvi. 19, xlvii. 2,) for the forefront of the house stood toward the East, and the waters came down from under, *from the* RIGHT *side of the house, at the South side of the altar.* These are thus represented as *flowing Eastward from North to South.* (Compare the ordering of the Tribes in Numbers ii. 1. Eastward, Judah. 2. Southward, Reuben. 3. Westward, Ephraim. 4. Returning Northward by DAN to the East) with a flood increasing in depth at every thousand cubits of distance from the East gate,—in the ratio of $1+2+3+4=10$, in all. But this was *the ratio* observed by all the ancient Orientals, *in their typical Chronology of four human ages to one Divine age of prophetic time.*

There can, therefore, be no reasonable doubt respecting the relation of this typical vision to that of Zech. xiv. 4, which tells us that "*the Mount of Olives which is before Jerusalem on the East shall cleave in the midst thereof toward the East and toward the West, and there shall be a very great valley; and half of the Mountain shall remove toward the North, and half of it toward the South.*" Neither can there be any doubt that this is the language of a metaphor derived from the typical dialling of those times, like that of Ezek. xlvi. 1—3, reserving the East gate for the Prince, with the power of going "*to and fro*" *by the* *same gate*—which nevertheless should *only be open to him on the Sabbaths and the New Moons.* The people, however, xlvi. 9, were not to go in and out by the same gate. But he that entered by the North should return by the South gate, and inversely.

This corresponds exactly with the typical structure of the Greek Egyptian Dial with steps;—numbering the 12 radiating hour lines to the 12 tribes of Israel—*as children of the light and of the day following the alternate courses of the Sun and Moon*—by a passage "*to and fro*" reckoned from North to South,—or inversely, in the Ecliptic, with the North and South thereof symbolized to the East and West Horizon, *with the Equinoctial points given to the hour of xii in the centre of an East and West Dial.* In this form they symbolized the beginning of their day and year sometimes from the *Autumnal*, and at others from the *Vernal* Equinox—as from the conjunction to the opposition of the Sun and Moon, and inversely at the Equinoxes.—Hence the change in the beginning of their week, *from Saturday beginning Westward to Sunday beginning Eastward;* when Callendaring a weekly Lunar circuit of seven days, *each having a separate planetary dedication on the seven front steps of the Dial.* But access to the mountain of God's House in this form was reserved only for the Prince—whilst open only to him *on the Sabbaths and the New Moons.*

This dated the beginning of typical time, Northward from the *New* Moon, as appointed by Joseph for a testimony to Israel—associated with its typical ordinances for the "*blowing of trumpets*" on the "feast of trumpets" *on the first day of the seventh month compared with the first day in a week of seven days.*

Thus the Quadrant measure of *the Sun's varying altitude monthly throughout the year divided into* two half Cycles of six months—was taken also to measure a Quadrant Lunar circuit of seven days. One of these was numbered solstitially—for Sundays and in the New Moons.—Hence the remaining Cycle of six days, including Monday, was reduced to one *of five when excluding Monday as numbered to the Sun at the time of the New Moon.*—The Dividing of this week to the Passover *in two half Cycles of* 3 *days—for the dividing of typical time*—would fall between Wednesday and Thursday. This explains the beginning of the old Calendarium for the Cycle of 5 days—*from Thursday dedicated to Jupiter, on both of the old Hindu Zodiacs.*

Thus, though the Passover stood typically in the division of their prophetic week of seven years reckoned from seventh month to seventh month, we are not thence to conclude necessarily that the 1st month of the Mosaic typical year of seven months should represent typically Sunday as the first day in the week of seven days ; and standing in *the dividing of time typically* and *Prophetically.*

The dividing of time, for "*day without night*" in a week of seven days—(omitting Sunday as of *Sabbatic account to the Solstitial* rest) would be between Wednesday and Thursday—harmonizing with the awful events of Passion week. But in a typical week of seven days and seven nights—or 14 typical days of 12 hours in a half month of 14 days ascending light between the new and the full moon—then the first month of the Mosaic year would represent, as it were, the first day of the week dividing in the half *two weekly Cycles of seven, from Monday, for the New Moon on the first day of the seventh month, to Saturday as seventh and last in a repeating Cycle of seven.*

These two Cycles were typically symbolized to the ascending and descending Nodes of light ;—but by a symbolism which reckoned descending, light *Southward to the Sun's South declination East and West. Also Northward to the Sun's North declination, East and West.*

The Ninevites divided a diurnal arc of 120° on the semicircular Dial of Babylonian origin to half the week of six days, as $3 \times 40° = 120°$. Israel, however, in the Wilderness set up the tabernacle of Moloch, and star of their God Remphan, *giving their diurnal arc to the idolatrous worship of their* NODAL day, measured by 40°, on the Equinoctial—*Eastward towards the Wilderness.* Hence the number of 40 years limited typically over their wandering therein from West to East given respectively to the North and South ;—when the monthly variations of ascending and descending light were measured Northward and Southward by the two Zodiacal Angles of 25° on their East and West Quadrant Dial.

This explains the one day's journey into the wilderness as taken by Elijah in the days of Ahab, 1 Kings xix. 1—9, compared with the liberty for a journey of three days demanded of Pharaoh for the Israelites by Moses, Exod. iii. 18. Also the *one* day's journey of Jonah, iii. 4, and iv. 5, compared with the *three* days of Jonah, iii. 3.

This opens out *anew* the question why were the two NODAL days marked in the differing relation to the other days of week as we find them on the two Hindu Zodiacs;—viz., between *Wednesday* and *Thursday* in a weekly Cycle of 8 beginning from Thursday to Jupiter at the Winter Tropic, but between *Tuesday* and *Wednesday* in a weekly Cycle of 9 days—*beginning from the Sun in one or other of the Equinoctial points.* Though the teaching of modern Astronomy respecting the nodes throws no direct light on this subject, still, if ever we discover the true clue it must so be in harmony with Astronomical *facts*, that the typical design originally intended will become more manifest by additional proof therefrom.

Modern Astronomy does not number the nodes of ascending and descending light to any particular points of the Horizon,—but defines the difference to be the points at which the Ecliptic is intersected by the Moon's orbit, *when ascending to the North, and when descending to the South; each of which intersections may occur towards any point of the Compass.* But the bright fortnight of the Northern path (when reckoned by the Hindus from Capricorn to Cancer) must have reckoned ascending light eastward from Tropic to Tropic—subsequently reduced to a Quadrant measure from Aries to Cancer.

The Dragon Worshippers, however, reckoned *it Westward and in Quadrant form, from Libra to Cancer, as in the symbolism of the Mithras d'Arles.*

Here we have two features of the old NODAL Astronomy bearing very close resemblance to two of the four cases of NODAL lunar influence on the Tides referred to in Lardner's Hand Book of Astronomy, vol. ii. p. 662, § 3222 to 3225.

1st. "*When the line of the Syzygies* (i. e., of conjunction and opposition between the Sun and Moon—*which typically symbolized to Earth's axis, between Tropic and Tropic, in the old Astronomy of Enoch) is in the line of Nodes.*" Compare their relative position North and South between *Tuesday* and *Wednesday* on the Hindu Zodiac for the week of 9 days: for the circumstances under which lunar influence on the tides is strongest.

2nd. "*When the line of Nodes is in Quadrature.*" Compare the relative position of the Nodes on the old Hindu Zodiac for the week of 8 days,—for the circumstances under which lunar influence on the tides is weakest:—viz., at the Quarterings of the Moon. Keith on the globes, part 1, cap. vi. p. 83.

Now the Magha and Sravana of the Hindu like the Thoth and Sothis of the Egyptians—symbolized the places of New and Full Moon—Northward and Southward to earth's axis, between the Tropics—and the Quarterings of the Moon, Eastward and Westward to the Equinoctial points; when comparing their solar year of 4 seasons with the lunation of 30 days divided into *four* lunar quadrants; each of which represented also—*a day and a year compared with a week of* 7, 8, *or* 9 *days, on the diurnal arc of their east and west Quadrant Dial.* Hence the formation of the "*Magnus annus*," or great Sothiac year of the Egyptians, called also their *Lustrum*, or 5 years cycle, because 4 × 360, or 1440 days, number 5 lunar years of 280 and 5 weekly cycles of 8 days. On the relation of this "Magnus annus" to the orbits of the planets in the formation of their typical Chronology, compare Cicero de Natura Deorum, lib. ii. cap. xx. with the Somnium Scipionis, cap. iv.

Monthly lunar influence on the tides seems to be the object of typical reference *in the Oceans which doubled the extent of the Dwipas, or Insular continents of the Hindus;* in their relation to the seven mountains and rivers of their typical dialling.

Their seven rivers are, I believe, to be accounted for thus, from Enoch lxxvi; viz., two answering to the junction of the Tigris and Euphrates before falling into the Erythrean Sea.

The *one* from the West, and flowing into a great sea, points seemingly to the Nile. Not that these rivers were otherwise than *allegorically* referred to in this kind of *typical* and *philosophical geography*. These references are to the rivers which watered the countries East and West, North and South, in which their ancient typical dialling originated,—between the plains of Shinar and the South of Egypt.

The rest may be best explained from *the philosophy* of the Vishnu Purana thus: in p. 228 we read that Dhruva (or the Pole star,—upon which the tail of Vishnu's *porpoise* symbolism for the sphere of Heaven was centred) serves for the pivot of the atmosphere. *On Dhruva rest the seven great planets, and on them depend the clouds.* The rains are suspended in the clouds, and from the rains comes the water which is the nutriment and delight of all, the gods and the rest; &c. &c. This sacred station of Vishnu, therefore, *is the support of the three worlds, as it is the source of rain.* Again, in pp. 230—1, we read "during 8 months of the year the sun attracts the waters, *which are the essence of all fluids*, and then pours them upon the earth (during the other four months) as rain; from rain grows corn, and by corn the whole world subsists. The sun with his scorching rays absorbs the moisture of the earth, and with them nourishes the moon. The moon communicates, through tubes of air, its dews to the clouds, which being composed of smoke, fire, and wind (or vapour), can retain the waters with which they are charged; they are therefore called Abhras, because their contents are not dispersed. When, however, they are broken to pieces by the wind, *then watery* stores descend, bland and freed from every impurity by the sweetening process of time. *The SUN exhales watery fluids from four sources: seas, rivers, the earth, and living creatures.*" This they symbolized *as the river of God, or central river of Paradise*, dividing itself into four heads. Of these, *three* seemingly took their names from those which watered the countries in which their typical dialling originated:—the fourth they symbolized to the Sun over the central river of the country as exhaling all the moisture of earth; to be given back in the form of rain with purifying and fertilizing influences concentrated, as it were, by the "genius loci" over the great river of the district—as over the Nile to the Egyptians, —over the Ganges to the Hindus, but over the Tigris and Euphrates to the ancient Assyrians and dwellers in Mesopotamia. The *Eridanus* (or PO) on our celestial globes—is most probably only a Western substitution for some ancient Oriental river of this typical philosophy.

A TABULAR ILLUSTRATION

WITH EXPLANATORY NOTE.

The Order of the 12 Tribes of Israel according to *Birthright.* Gen. xxx. to xxxv. with xliii. 33.

<table>
<tr><td>1. Reuben
2. Simeon
3. Levi
4. Judah</td><td>To Leah before she ceased child-bearing *for a time.*</td><td rowspan="5">Here we have (inclusive of Dinah—for the NITOCRIS in the Egyptian Cycle of the 330 kings) the old Jewish Cycle of 11×27* compared with the Noah's ark lunar year of 10 times 30 days, divided to four lunar seasons measured by four lunar Quadrants of 75° on the Equinoctial.
1. To Leah. 2. To Billah. 3. To Zilpah. 4. To Leah's renewal of Childbearing as finally ceasing at the birth of DINAH for her representative amongst the tribes of Israel.</td></tr>
<tr><td>5. Dan
6. Naphtali</td><td>To Billah, Rachel's handmaid.</td></tr>
<tr><td>7. Gad
8. Asher</td><td>To Zilpah, Leah's handmaid.</td></tr>
<tr><td>9. Issachar
10. Zebulon
*Dinah</td><td>To Leah, on renewal of child-bearing.</td></tr>
<tr><td colspan="2">* $11 \times 27 = 293$. Add 3 (as from 27th of 2nd m. Gen. viii. 14) for the old lunar year of 300 days—as that of the Noah's Ark symbolism.</td></tr>
<tr><td>11. Joseph
12. Benjamin</td><td colspan="2">To Rachel—for the two lunations numbered—to the Sun's north and south declination from the Equator to the Tropics in the Astronomy of Enoch.</td></tr>
</table>

Rachel called her last son *Benoni*, or the son of my grief, as dying in childbirth; but Jacob called him *Benjamin* or *the son of his right hand.* This evidently had a typical reference—like that by which Jacob was guided when placing *his right* hand on the head of *Ephraim, the younger of Joseph's two sons.* Can this have been the event from which reference is made in Psalm lxxxi. 3—6, to the *New Moons,* (commemorated by the blowing of trumpets *on the first day of the* *seventh month)* as ordained in Joseph for a testimony; and made a statute for Israel; and a law of the God of Jacob? For this was made *a memorial of the Exodus equally with the full moon of the Vernal Equinox, as ordained by Moses.* Exod. xii. 2. Thus the early Christian Church in solemnizing the 70 days *from Septuagesima Sunday to Easter Day, (as of especial account typically)* may have had reference to the fact of Jacob's representing only a family of 70 souls when going down into Egypt, but departing therefrom as a mixed multitude, like the stars of heaven in number.

Thus the 390 days of years *typically reckoned to Ezekiel's left side for Israel—were increased by* 40 *similarly reckoned to his right side for Judah*—under circumstances presenting an inspired *clue to the prophetical distinction between right and left, as here typically referred to.* For in speaking of heaven as God's throne (Ezek. i. 10 with iv. 4—7), he places *the Zodiacal sign Leo in connection with the face of a man or angel on the right side,* as opposed to *the face of an ox for the Sun in Taurus, on the left,* whilst the face of the Eagle (as that of the Assyrian God, Nisroch) pertained to all those symbols for the Solar year divided into four seasons.

$$\left.\begin{array}{l}\text{But } 360+30=390\\ \text{And } 360+40=400\end{array}\right\}\text{ whilst their sum, or } 390+40=430.$$

Hence we are enabled to trace the ground upon which Israel's bondage in Egypt is scripturally referred to in two distinct forms: at one time as a period of 400 years by adding the lunation of 30 days to the old solar year of 360—as combining therewith the idolatrous worship of the Babylonian NITOCRIS; at another as a period of 430 by adding 40 for the NODAL day of Israel's idolatry in the wilderness, (when measured by 40 degrees of the Equinoctial for as many days and days of years) to the 390—for the 430 of Exod. xii. 41; xxxii. 1: and Acts vii. 40.

The Egyptians (as Enoch to *the Sun's sixth eastern gate* in his typical astronomy) symbolized their star of Sot, or SOTHIS,—*northward to the Dog-star in Cancer, for the end of typical and prophetic time, at the place of the Moon's change, or that of the New Moon.*

In like form they symbolized their **THOTH**, or beginning of typical time—to the *first eastern gate of the Sun* in the typical astronomy of Enoch. This they reckoned to the Winter Tropic *for the place of the full moon symbolized to "the dividing of time" in lunar* *form;* for half the lunation of 30 days compared with half the old lunar year of 300 days.

In this form they compared *the beginning and dividing of lunar time, with the diurnal arc of* an east dial divided in the half by the morning hour of six. For this they next substituted that of an east and west, or polar equinoctial dial, divided in the half at the hour of noon. This is the typical meaning of Zech. xiv. 5—10, also of Ezekiel's typical ordinances for the sanctuary—viz., for the approaches of the people being limited to *the North and South—but so that they should always go out by the gate opposite to that by which they entered.* The east gate was reserved for the Prince alone, *with power to go in and out by the same gate;* but *that gate was always to be shut, except on their Sabbaths and New Moons.*

This may be illustrated from the structure of the Greek-Egyptian dial. For the shadow from the east and west horning of the curved part passes "*to and fro*" as between the north and south ecliptic given to the east and west horizon—whilst the front steps form a Quadrant measure of ascending and descending light, divided into a Sabbatic cycle of days, months, and years.

Deut. xxvii. 12, 13, compared with Gen. xxix. to xxxv., for order of birthright compared with that of Jacob's blessing, Gen. xlix.

Tribes to Mt. Ebal, Northwards to the Sun's North Decl.		Tribes to Mt. Gerizzim, Southwards to the Sun's South Decl.	
Reuben Zebulon	to Leah.	Simeon Levi Judah Issachar	to Leah.
Dan Naphtali	to Billah, Rachael's maid.	Joseph to Rachel	for Ephraim and Manasses.
Gad Asher	to Zilpah, Leah's maid.	Benjamin	Rachel's last.

As called from the four winds of heaven in Christ, for the sealing of an election out of both the Kingdoms of Israel, Rev. vii. with Zech. xiv. 4—10 ... ... To the kingdom of the two tribes.

Benjamin	Judah
Joseph	Reuben
Zebulon	Gad
Issachar	Aser
Levi	Nepthalim
Simeon	Manasses

The Kingdom of the 10 tribes, in its relation to the house of 5 divided against itself in Messiah's day. Luke xii. 52.

h for Num. II.

2. Reuben.
Simeon.
Gad, for Levi.

with the taber-
he centre.

Benjamin.
Manasseh.
3. Ephraim.

West to North

East and West to North of the Holy Oblation.
Ezek. xlviii.
Seven Tribes.

Dan.
Asher.
Naphtali.
Manasseh.
Ephraim.
Reuben.
Judah.

The Holy Oblation four square and measuring 25,000 reeds on every side.

East and West to South of the Holy Oblation.
Five Tribes.

Benjamin.
Simeon.
Issachar.
Zebulon.
Gad.

FACTS OF THE GREEK-EGYPTIAN DIAL.

The facts of the Greek-Egyptian Dial with Steps, as traceable from its mechanical structure, geometrically considered, are simply these :—

The hollow semicircular Dial is an east and west Dial for N. lat. 25° (as nearly that of Denderah or Tentyra), being inclined for that latitude. The steps represent, to a certain extent, a combination of the upper and lower Polar Dials for the same latitude. The meridian line may represent the "equinoctial colure," so as to bring the equinoctial points to the centre of the Dial for the first meridian, dividing between east and west longitude; or it may represent the solstitial colure, for the typical position of Taurus on the Zodiac of Tentyra, which is the same as that on the *Oxford* symbolism.

The lowest or outermost curve represents an arc of 2 × 60°, or 120°, on the semicircle of which that curve is a part.* Its 12 divisions are *unequal;* but, as representing in all 120°, measure 3 × 40° for 3 days of typical time. Thus Jonah's journey of 3 days across the great city NINEVEH seems to have been typical, and his prophetic mission one of spiritual light from God, for the salvation of a people enveloped in the darkness of idolatry, as victims of its demoralising power.

Though the two upper curves of the Dial have (apparently) the same centre as the equinoctial, of which the large outer curve is an arc,* there is, nevertheless, a difference in the arcs which they respectively represent. That difference, moreover, seems to result from this typical dialling having *at least two* (viz. 84° and 105°) if not *four different centres on the line of sines.* The once assumed difference of inclination given to four classes of the radiating lines

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* Upon more accurate observation, the centre of the lowest curve is not that of the equinoctial, but in the intersection of the meridian by the parallel of 105°.

(when considering the lowest curve as an arc of the equinoctial divided into 12 *equal* parts of 10° each) is now abandoned for the idea that the 12 divisions of the lowest curve represent an arc of 120°, divided into 12 unequal parts,* all radiating from the centre of the Dial on the parallel of 83°, and drawn through the 12 points of the middle curve; as 130° or 132° divided as 10 of 12° + 2 of 6°, for an eleven-hour day, or *twice* $5\frac{1}{2}$ *hours.*

The boundary-lines of the middle curve radiate (seemingly) from 6° or 10° below the centre of the equinoctial, as from 84° or 80° on the line of sines to 65° on the circumference of the equinoctial.

A line drawn horizontally through 80° or 83° on the line of sines,

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* The points through which the 12 hour-lines pass on the lowest curve are to be determined thus :—Place a ruler over the centre of the DIAL at 84°, and the 12 intersections of the middle curve divided as 10 of 12° + 2 of 6° = 132°. Mark the points in which the lowest curve will be intersected by lines drawn from the centre of the Dial through these points on the middle curve. These will be the hour-lines for that part of the Dial.

Hitherto I have regarded the lowest curve of 120° as divided into 12 equal parts by lines radiating from the centre of the equinoctial, and that the 12 points of the middle curve were thus determinable. I have now abandoned that idea, and regard the centre of the Dial at 83° or 84° as the point to which the radiating hour-lines should converge, for *all* the curves.

The arcs respectively spanned by the three curves of the hollow semicircular Dial are—

1st, and nearest the centre, an arc of 2 × 72°, or 144°. The supplement of this, to complete the semi-equinoctial, is Pheron's hour of 18°, numbering 72 minutes in time. The variations are 2 × 75° = 150° and 2 × 70° = 140°.

2d, or middle curve, an arc of 2 × 65°, for the 130 numbered to the life of Adam at the birth of Seth. This was supplemented by 2 × 25°, for the zodiacal angles of the Sun's north and south declination from tropic to tropic. It combines, moreover, the Hebrew cycle of 70° with the Egyptian cycle of 60°. Its variation is 10 of 12° + 2 of 6° = 132°.

3d, and lowest, the arc of 120°, with its 12 unequal divisions.

The relation of 12 × 12° = 144° on the uppermost curve to 10 × 14°, for half the old lunar year of 280 days, shows that its dialling object was (through their Polar dialling for a day of 10 hours, numbered as 10 ascensions of lunar light in the old lunar year of 10 months) to harmonise solar and lunar time. This they did by comparing a semidiurnal arc of 7 hours (dedicated to the same planets) with the 7 days of the week, numbered over 2 cycles of 12 hours, for 12 of day and 12 of night, or 12 of solar and 12 of lunar account. This last they symbolised to Noah's antediluvian life, as the same with the Egyptian cycle of Horus, which also numbered 300 days of years. Nevertheless, that old lunar year of 10 months did vary the number of its days to suit their differing modes of comwill measure (*by the horizontal top of the Dial*) the difference between the inclined meridian of its curved part and the radius of the outer curve, as centred on the parallel 105°.

The points of intersection between the outer boundary-lines of this curve terminating at 65° on the circumference, and those of the bottom curve terminating at 60°, give the points through which this curve must pass, as drawn from the centre of the Dial at 83° or 84°, with a radius of something like 40° or 35° on the line of chords. Its radiating hour-lines *either converge to the same centre as those of the uppermost* curve, or represent merely lines drawn to connect the 12 points of the uppermost curve (otherwise ascertained) with the 12 points of the middle curve.

The uppermost curve is limited to a span of 12 × 12° = 144° at the intersection of the equinoctial, drawn with radius 15° by the diagonal lines, which extend from the extremities of the lowest step to the parallel of 96° or 100°, *i.e.*, either to 6° or 10° above the equinoctial; for a dialling arc of 12 8° = 96°,

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puting the lunar month, in its relation to their solar year of 12 × 30 = 360 days. Noah's postdiluvian life of 350 years, or *seven* divine ages of 50 days each, left only 10 days of difference between solar and lunar time. These the Egyptians typically numbered over the Isle of Elbo (or el-bo, "God comes"), which Asychis raised, as an asylum for himself in the marshes, during the 50 years' usurpation of Sabacus the Ethiopian, and crocodile god-king of the ancient Egyptians.

The oldest form of the solar year, as limited on the equinoctial to 360° for days of years, seems to have contemplated a harmony of solar and lunar time (numbered respectively in lunar years of 10 months, and solar years of 12 months) by comparing 4 weeks of 9 days to a month with 3 weeks of 10 days, for 10 × 36 = 12 × 30 days.

Similarly for the celebrated cycle of the 330 kings of Egypt, from Menes, the founder of the kingdom, and last in the *old* cycle of 11 kings (as 11 × 30 = 330, for the year of 11 months, compared with the day of 11 hours, on an erect direct east *or* west Dial), but first in that of the 12 kings who succeeded this cycle of 11, on their hollow south-vertical or east *and* west Dial, inclined according to latitude. The old Egyptian chronicle numbers only 332 years (as if for Noah's cycle of 300, increased only by 1 month of 4 Egyptian weeks of 8 days) to the reign of the 12 gods. Hence the subsequent computation of 12 × 28 = 336, for 12 lunations of 28 days each. This sufficiently identifies their reign with the times in which the Egyptians began to reckon lunar time by 4 weeks of 7 days each to a month.

Now, they who can read the monumental records of Egyptian history date this from the reign of Aphophis, the Sun-Pharaoh of Joseph's day, the badge of whose family worship was designated thereby when numbering a family of *seventy souls.*

or for 100 days and 100 nights in the 100 years of Brahma's life. The 12 divisions of this arc either represent equal parts, or the intersection of that curve by lines drawn from 84° on the line of sines to the points found upon the middle curve, in the way before described.

By the "line of sines" in the above remarks, I mean the meridian, as supposed to be divided into 9 divisions of 10° each by as many lines drawn from side to side of the semicircle through the corresponding intervals of 10° each on the circumference. Thus the "Diespater," or daily providence, of this typical dialling (idolatrously used) was the Phiops of the Egyptian monumental records, and one with the APHOPHIS, or the Sun-Pharaoh, who ruled in Egypt, in conformity with the counsels of Joseph, for his good and that of his people.

Bunsen says Aphophis, Set or Seth, and Typhon, are different names for the same thing, and I think he is right; for the Baalistic Orientals were essentially Dragon worshippers, as worshipping the NODES of ascending and descending light, given respectively to the head and tail of the Dragon, when Hydra was made a 7 days' measure of lunar time. But when the idolatrous worship of the Nodes ceased with the death of Abel by Cain, ascending and descending light were respectively symbolised to Aphophis—as Seth, born to Adam in the 130th year of his life. This they symbolised to their solar year of 360 days and 360 nights (or 720 typical days of years), increased by the 210° which measured the arc of their summer day in the Paradise of Jewish typical prophecy, reckoned also as days of years, completing the term of 930 days of years numbered over the life of Adam.

But when 130° on the same equinoctial were numbered to the life of Adam, on the birth of Seth, the 2 zodiacal angles of 25° each were substituted for the NODES, as a new measure of ascending and descending light. Hence, for the purpose of their semicircular dialling, inclined according to latitude (and therefore no longer taking the equinoctial hour for its standard of time), they substituted, for 50 + 130° = 180°, an increase of the 2 zodiacal angles estimated at 25° each, by the 80 years' life of Aphophis. By this I think they meant the 100 years of Brahma's life, *less one hour of Enoch's summer day*, or less 20° on the equinoctial; answering to 1 hour of 80 minutes, reckoned as 80 days of years.

An inspection of the diagram entitled "The Figurative Language of the Ancient Egyptian Geometry," will show that the height of the Greek-Egyptian Dial with Steps was spanned by 80° to Aphophis, or 84° to *Helius*, east and west on the semi-equinoctial.

By these reigns of Helius and Aphophis, the Egyptians reduced the quadrant of 90° (for a typical and idolatrous dialling purpose) to one of 84° for 80°. Thus they substituted 7 steps of 12° each, or 8 of 10° each, for their 6 monthly chronicles of the Sun's ascending and descending circuits from tropic to tropic. But 2 × 84° measured 12 half months of 14 days, for a Sabbatic reckoning of weeks, substituted for half the old Chaldean reckoning of months by 3 weeks of 10 days, or 3 weeks of 9 days each. The Egyptians reckoned alternately 2 weeks of 7 and 2 of 8 days, for $14 + 16 = 30$, as in the arrangement of the deified simulachra of their Sun-Pharaohs in the chamber of Karnack. Jeroboam's sin, in respect to the calves he erected at Dan and Bethel, substituted the Egyptian weekly and monthly cycles of 8, in association with their Baalistic idolatry, for the typically appointed Sabbaths of the Jews. (1 Kings xii. 32.)

This is, I apprehend, the true reference in Rev. xvii. 2, to an *eighth* head of the *seven-headed, ten-horned* symbolism for the idolatrous dragon-worship of the *ancient* Orientals, when obtaining revived existence in the Jewish Church; for that was the two-horned false prophet of this imagery, when, in the days of the restored kingdom, renouncing the typical institutions of Moses for the Dragon worship of their heathen neighbours, as revived in the Greek-Syrian and Greek-Egyptian kingdom of Alexander's successors. The woman of Rev. xvii., in regard to the *seven-headed dragon*, symbolises the idolatrous worship of the Ephesian Diana, whose image was thus worshipped as coming down from Jupiter. This refers to their symbolism for the conjunction of the Sun and Moon given to mid-day, for the time when lunar light was subjected to the greatest obscuration.

The millennial kingdom of Rev. xx. refers to the millennial duration of the kingdom given *typically* to David's son in Solomon, for the interval of about 1000 years between the building of the first Temple and the final destruction of the city and Temple of the second or restored kingdom, under the predicted judgment which had its consummation in the events of the apostolic age.

These were symbolised as the drying up of the waters of the mystic Euphrates, that the *first fruits* of the world's redemption in Christ (or the mystic 144,000) might pass over westward to the Isles of the Gentiles with their mission of Christ's everlasting gospel. This "began" to be preached in Judea at the sounding of the *seventh or harvest trumpet of Levitical account*, for that was prophetically appointed to proclaim *the time of the end* predicted in Daniel over the sacrificial law of the typical ordinances instituted by Moses.

Thus, by "the end of time," in Rev. x. 6, we are to understand the "end of *typical* and *prophetic* time," as connected by the other ancient Orientals, who were not Jews, with the idolatry of their Dragon worship. In the reckoning thereof, they divided a week of 6 days into two cycles of 3 days.* This form of the week omitted Sunday and the two days given to the nodes by the Egyptians in their week of 9 days, thus reduced at first to one of 8, and then to one of 6 days.

The week of 9 days, as reduced on one Hindu zodiac to one of 7, by rejecting the 2 days given to the nodes, but retaining Sunday, marks the Judeo-Egyptian origin thereof, for it represents the celebrated typical and prophetic cycles of 2 × 3½ days for the week of 7 days, and 2 × 1260 days for their week of 7 years.

This they seem to have chronicled on their typical dialling with steps in the following manner :—

The day of 12 hours on their hollow semicircular Dial spanned an arc of 120° on the equinoctial.† Thus they reckoned 60° to 6 hours eastward, and the same westward from the meridian. Similarly on the side steps they set off *one* hour of their Polar Equinoctial Dial, viz., that from vii. to viii. A.M., and that from iv. to v. P.M. *to an arc of* 60° *for the breadth of the side steps*, whilst limiting the height of the steps to the quadrant of 90°. From either extremity of the bottom step they drew through each quadrant, extended to about an arc of 105° (for 7 hours of 15° each), *a diagonal line.*‡ This cuts off 7 parallel hour-lines to the side steps within a limit of 60° in width on *the quadrant of height above referred to.* These divisions of the side steps answer, moreover, to the computation of the Jewish Pentecost, as 7 weeks of 7 days, called 50 ; for a harmony between the Jewish chronology and that of their idolatrous neighbours, who reckoned (from a basis of 5 days for the lowest term) four human ages to their divine age of 50 days. This they did by giving 20 to the first or golden age.

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* Sometimes as 3 × 45° = 135°, or half of 270° ; at others as 3 × 40°=120°, whence the typical computation of 120,000 souls in NINEVEH.

† See *Note*, p. 1.

‡ Possibly (as elsewhere described) these diagonal lines should be drawn from the extremities of the bottom step to their intersection of the meridian on the parallels of 96° or 100°, *i.e.*, on 6°, 10° above the equinoctial on the line of the sines.

15 to the silver age, as that of their three sacrificial fires.
This numbered (as did Enoch) the half-monthly increase and decrease of lunar light by three quintuples of days.
10 to the age of brass, as that of doubt.
5 to the age of iron, or age of sin, and *end of time* — viz., *of typical and prophetic time.*
Total 50, *representing Brahma's Divine age.*

The shadows from the east and west horns of their hollow semicircular Dial divided their weekly cycle of 7 days into 2 of 3½; whilst the shadow from the extreme point of the Gnomon marked the six months of ascending and six of descending light, limited over the Sun's course from tropic to tropic. By comparing 84 for the reign of Helius with the quadrant of 90°, they substituted 3 months of 28 days for 3 of 30, and thus obtained a seventh step for the central mountain of gold. This they gave to Sunday for the Sun culminating over the region of Havilah in Paradise, where the gold of the land was good in the golden age of man's primeval history.

From the above data I think we may safely draw the inference, that the object of the side steps was for the weekly calendarium of 7 days, repeated twice, viz., for the semi-diurnal arcs of 7 hours for 2 days,* viz., 7 from Sunday to Saturday on the western steps, and 7 from Sunday to Saturday on the eastern steps. Blundevil thus numbers *two cycles of seven days to the planets* when comparing 7 planetary hours of Enoch, or 7 × 20° = 140° for 140 days (or half the lunar year of 280 days), with a diurnal arc of 12 × 12°, or 144° on the equinoctial. These were but slightly differing modifications for 10 × 15°, or half the old lunar year of the Noah's Ark symbolism.

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* Between these two cycles of 7 days, they gave 6 of the front steps to 6 cycles of Jupiter, or 6 cycles of 5 days (from Thursday to Monday) compared with the 6 monthly stages of the Sun's path from tropic to tropic. Possibly the fall between the lowest curve and the top step was for a double purpose.

1*st*, To throw the seventh or top step behind the range to which the action of the central gnomon on the steps, was to be limited by the structure of the Dial.

2*d*, To eliminate the eighth step required for the Egyptian week of 8 days.

The metaphor under which the drying up of the waters of the mystic Euphrates is referred to in the language of Jewish typical prophecy, may be traced in the Grecian etymology of the word *Bosphorus*, as a name of typical import translated by ourselves into *Oxford.*

Its meaning is in effect the same as that of *Elbo* (or El-bo, "God comes"), given to the little island which Asychis, who built *the east* entrance of the Temple of Vulcan, built as an asylum for himself in the marshes *during the usurpation of Sabacus the Ethiopian, which lasted for* 50 *years.* This island (the priests told Herodotus) was not discovered by any of the kings of Egypt who followed Asychis until Amasis, the last of the cycle, after an interval of 700 years.* In the typical and dialling geography of the ancient Orientals, they called the full lunation of 30 days *a large island,* and the half lunation of 14 or 15 days *a smaller island.* Thus they numbered 7 × 30° = 210° for the diurnal arc of their summer day in Paradise, alternating with their long winter night. To this they then added 11 × 14° = 154° for eleven ascensions of lunar light to complete Enoch's solar year of 210 + 154 = 364 days.

Thus, when they divided the equinoctial of 360° to the lunation of 30 days, each quadrant represented a week of 7 or 8 days. But the older division of the lunation was not into four quadrants, but into 3 weeks of 9 or 10 days. Each week of 10 days would thus be spanned by a chord of 120° on the equinoctial. Two of these would, in dialling form, span the diurnal arc of Enoch's summer day, or 12 hours of 20° each. These together measure 240° on the equinoctial; *for the golden age of lunar light, given in ascending and descending form to the zodiacal angle of the Sun's half-yearly circuit from tropic to tropic.* This they symbolised *westward, on*

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* These 700 years are of typical account, representing typical days of 12 hours each. For reckoning 360 days and 360 nights as 720 *typical days of years*, they reduced these by 20 days of 12 hours, or 10 of 24 hours. Hence the 10 days given to the obscuration of lunar light by the Sun, when comparing the lunation of 30° with the equinoctial of 360, and reducing both by 10 for a comparison therewith of *Noah's postdiluvian* life of seven Divine ages, or 7 × 50° = 350° for the then mode of harmonising solar and lunar time.

the face of their dialling, to represent the Moon as bringing on the days and years, according to Enoch. *Hydra* impersonated Sabacus the Ethiopian, or their crocodile god-king, whilst they reckoned ascending lunar light westward going north by the dragon's head, and decending lunar light, as eastward going south, by the dragon's tail. Hence arose their *monthly* measurement of *lunar obscuration unto complete darkness,* by 1 week of 10 days. This they reckoned *to the Sun's* north declination on the front steps of the dial, and equivalent to a chord of 120°. By this they *once* measured the harvest-season of 4 months, thus symbolised to the Sun's apparent course from east to west, as from Taurus to Leo. Hence the Chancellor's official seal for the University of Oxford exhibits the *Ox* preparing to begin his travels *from east to west across the ford.* If it be alleged that etymologies are uncertain, and that some say the name of *Ox*ford is a corruption for *Ouse*-ford, this will not place the supposed argument against me in a stronger light ; on the contrary, it corroborates my case. For though Camden says the *Ouse* is the same as the *Isis,* he does not say that the passage of the river Isis is meant in the name of Oxford. But, even thus interpreted, it is equally *a name bearing typical reference to the ebbing or drying up of water to an extent sufficient to provide a fordable passage for the convenience of wayfarers.* The title thus derived was figuratively given to represent the dawn of light eastward, by which the previously all-pervading darkness of heathenism should be ultimately dispersed, as certainly as men were taught to thank God for a renewal of His promised harvest-mercies, as nigh at hand when the Sun was in Taurus. What more natural than the occurrence of such a thought, as induced by the theological studies of learned men, well read in Jewish prophecy, when founding schools which should maintain the then hard-earned ascendency of Christian principles over the darkness and cruelty of heathen idolatry in the land ?

St Cuthbert's Island Home, at Lindisfarne, seems to have been chosen with a similar typical design. For the passage of the waters between Holy Island and our own (when fordable) would follow the apparent course of the Sun from east to west. Its other typical design would be probably for security against his heathen neighbours, analogous to that by which Moses was influenced in the peninsula of Sinai, to make the waters become to him, under the protecting providence of God, a wall of defence on their right hand and on their left.

My *new* diagram (No. 1) for illustrating the dialling value of the lines formed, when considering geometrically the mechanical structure of the Alexandrine Dial, corrects a previously unforeseen error in all my other attempts to illustrate it, *on a front view.*

For that purpose, I previously laid it over the paper, on its back, by which I was inadvertently acting with it as a horizontal Dial, whilst mentally regarding it as a south vertical. But for this its centre must be placed vertically over the centre of the equinoctial, and its lowest step will then stand over the parallel of 45° on the equinoctial. My detection of this previous inadvertence has been of great service to me in this attempt to explain from its structure (as a quadrant Dial) the evidences of a typical design blended with that of its horological value.

As my thoughts on this subject have been in progress of development whilst the preceding observations were passing through the press, I have here subjoined a recapitulation of the evidence, that any incidental obscurity of my meaning under one form of expression may be corrected by the fuller details of this afterthought.

The point through which the second or middle curve has to be drawn with radius centred on 6° below* the centre of the equinoctial *on the line of sines*, is to be determined by the intersection of the hour-line,† which passes from the centre of the Dial, at 84° to 60° on the circumference, with a line passing from 80° on the line of sines (which determines the top of the Dial) to 65° on the circumference. The radius for this, when drawn from the centre of the equinoctial, measures about 40° on the line of chords. But when taking 84° on the line of sines for its centre, the radius measures only about 35° on the line of chords. Now these are both typical measurements of dialling significance. For as the radius of the lowest curve, taken at 60°, gives 6 × 60° = 360° for the whole span of the equinoctial; so 6 × 40° = 240°, or 6 × 35° = 210° gives the complete circle, of which the middle curve forms a part. The

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[*] As a further progress of the thought, I now regard the two uppermost curves *as concentric with the equinoctial;* and the points which divide radius a chord of 60°, into 3 equal parts, as the points through which the upper curves are to be drawn.

[†] The hour-lines all radiate from the centre of the Dial, not from that of the equinoctial; but the boundary-lines of the middle curve might nevertheless be determinable by lines drawn from the centre of the equinoctial to 60° on either side of the circumference.

cycle of 240° represents the summer day of Enoch, for a latitude nearly the same as our own; whilst 210° represents the summer day of 14 hours in the pyramid plain.

But whichever cycle is represented thereby, the span of the curve, as limited to the dialling object of the Greek-Egyptian Dial with steps, represents only an arc of 2 × 65°, or 130°, or 2 × 66° = 132°.

Now, this arc of 130° is not merely the supplement of the two zodiacal angles estimated at 25° each, but it combines two cycles of typical importance in this dialling, viz., the Hebrew cycle of 70° and the Egyptian cycle of 60°.

Now, 2 × 70°, or 140°, will give a 10 hours' day of 14° to an hour to ascending and descending light on the side steps for a comparison between the semi-lunar year of 140 days, and that of the Noah's Ark symbolism, or 150 days, measured by 10 equinoctial hours of 15° to an hour on the Polar Equinoctial Dial, by which the parallel lines of the 7 steps are crossed.

The point through which the uppermost and smallest curve must pass (with the centre of the equinoctial for its centre and chord of 15° for radius to an hour-circle of 6 × 15° = 90°), is* where lines drawn from 6° below the centre of the equinoctial, on the line of sines, pass through the intersection of that hour-circle by the lines drawn from the extremities of the lowest step diagonally to 96° on the line of sines, or 6° above the centre of the equinoctial. This arc cuts off from the hour-circle two segments of 72° for the celebrated hour-cycle of 12 × 12° = 144°. The lowest step is spanned by a chord of 45° on the equinoctial, and the *quadrant* height of the steps represents half the base of the trigon when adding the analemma for a calendarium to the horological object of the Dial. The height, therefore, of the steps will be varied by the latitude, though always representing (like the statue of the Mithras D'Arles) a quadrant in altitude. But, in this case, the quadrant is divided to *seven*, instead of the *six* steps limited over the six monthly measures of the Sun's half-yearly circuits from tropic to tropic. The object of this was to substitute a weekly calendarium of 7 days for the idolatrous cycle of six, which omitted Sunday.

The mechanical device to accomplish this object seems to have been twofold.

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* This, and observation 2d, p. 12, are now to be qualified by that of the note to p. 10.

1*st*, By cutting 6° from the quadrant on the steps for the top step.

2*d*, By the intersection of two circles, drawn with the same radius, a chord of 60°. But one from the centre of the equinoctial, and the other from 84°, or 6° below the centre of the equinoctial on the line of sines.

Thus both the top of the Dial, *and the under line of the* top step, represented the parallel of 84° on a quadrant of the equinoctial. The 84° of the quadrant thus remaining to the steps, they divided into two equal parts, for the centre of an hour-circle, drawn with radius, a chord of 10° on the equinoctial, to cross the parallel lines on the steps by the hour-lines of a Polar Equinoctial Dial.

Thus they measured the semi-lunar year of 150 days by 10 equinoctial hours of 15° each, for a cycle of 150 days, measured by 150° on the equinoctial.

This, their winter day of 10 × 15°, in N. lat. 30°, they converted into a day of 12 hours, as 12 × 12° = 144° substituted for 12 × 10° = 140°, to give the weekly calendarium of 7 days to a diurnal arc of *twice seven hours, measured by* 10° *each on the equinoctial.* Each cycle of 70° they gave *to one hour*, and day, and week, eastward and westward on the side steps, giving the analemma by which they measured the Sun's half-yearly circuits from tropic to tropic (as on the calendarium of the ham-shaped Dial) to the 5 days' cycle of Jupiter, and the image of the great Diana coming down from Jupiter on the meridian of the Dial.

The cycle of 144°, thus considered, makes it clear why Blundevil framed his calendarium to dedicate a daily cycle of 12 hours to the same planets as the 7 days of the week for a harmony between solar and lunar time. For thus they gave Enoch's western gates of heaven to lunar time for the hours of night, and his eastern gates to solar time for the hours of day. Thus they divided their typical and prophetic day of 24 hours into two typical cycles of 12, the one given to *night* and the other to *day*, to make up a day of 12 × 12° = 144° on the equinoctial, compared with a 10-hour day of 14° to an hour. Thus they obtained for their typical dialling *two weekly cycles of* 7 *days each*, *equivalent to their day of* 12 *hours.*

The subjoined tabular statement will perhaps show more clearly how they extended their cycle of 12° to one of 14°, by reckoning the *third* hour of their lunar cycle for night, as the *first* of their solar cycle for day, thus :—

Hours of night,		1	2	3	4	5	6	7	8	9	10	11	12	...	...	1	2
Hours of day,		,,	,,	1	2	3	4	5	6	7	8	9	10	11	12		
Limitation of the Greek numerals on the Greek-Egyptian Dial,		,,	,,	γ	δ	ε	ϛ	Z	H	Θ							
English equivalents, as if intended to reduce the old week of 9 days to one of 7,		,,	,,	3	4	5	6	7	8	9							
Planetary dedications,				☉	♀	☿	☽	♄	♃	♂	☉	♀	☿	☽	♄	♃	♂
The calendarium for the week of 7 days harmonised with the old cycle of 5 for the reign of Saturn before Jupiter,	Sun.,			1	6	4	2	7	5	3	1	6	4	2	7	5	3
	Mon.,			2	7	5	3	1	6	4	2	7	5	3	1	6	4
	Tues.,			3	1	6	4	2	7	5	3	1	6	4	2	7	5
	Wed.,			4	2	7	5	3	1	6	4	2	7	5	3	1	6
	Thurs.,			5	3	1	6	4	2	7	5	3	1	6	4	2	7
	Fri.,			6	4	2	7	5	3	1	6	4	2	7	5	3	1
	Sat.,			7	5	3	1	6	4	2	7	5	3	1	6	4	2

The P.M. of Saturday numbering 7 hours to 7 days of 12 hours for 3½ of 24 each; for the beginning of their SABBATH from the *evening* of Saturday, and illustrating the *evening* and *morning* of Gen. i. over the *evening hours* of the *last* day in the week, compared with the *morning hours* of the *first* day.

The A.M. of Sunday numbering 7 hours to 7 days of 12 hours for 3½ of 24 each; for the close of their SABBATH with the morning of SUNDAY.

The to and fro of the shadow daily going forward until noon, and backward in the afternoon, proceeds from the east and west horns of the semicircular Dial. The monthly variations of the Sun's altitude will be shown by a point of shadow, or point of light, from the extremity of the central Gnomon.

Seven hours of 10° each would be as 3½ of Enoch's summer day, numbering 12 hours of 20° to a diurnal arc of 240°. Thus 14 of 10° would divide the weekly cycle of 7 days into two half cycles of 3½ days.

This proves the dialling use to which they turned their typical and prophetic day of 12 hours (for *day without night*), compared with their *Nycthemeron*, or day of 24 hours, including a night of 12 hours.

This cycle was again numbered on the front steps of the Greek-Egyptian Dial with steps to 4½ hours between vi. and xii. A.M. Also to 4½ between xii. and vi. P.M., on their Polar Equinoctial Dial, for a typical comparison between 6 equinoctial hours and 4½ hours of Enoch, or hours of 20°, numbering 80 minutes to an hour in summer time. Thus 6 × 15° and 4½ × 20° are equally measured by the quadrant of 90° to morning and 90° to evening on the semi-equinoctial of 180°.

But 180° equals also 18 × 10° for the 18 Ethiopians of Herodotus numbered to a diurnal arc of 10 hours, each of which represented the hour of 18°, or 72 minutes to an hour, as that of Pheron, son of Sesostris.

The weekly calendarium for this would represent two half-cycles of 5 days for 5 × 18° = 90° to morning and evening.

Again, the weekly cycle of 14 days, each limited to 12 hours, and distributed to the side steps *in two cycles of seven* (reduced to 2 of 3½ in days of 24 hours each), measured the semi-lunar year of 140 days, typically, by 140° on the equinoctial. From the semi-equinoctial of 180°, by deducting the above 140,° we have the difference of 40° left for the calendarium on the centre of the Dial. But this is also the typical measure of *Sunday*, on the centre of the equinoctial given to the Hindu zodiac for the week of 9 days reckoned as 9 × 40° = 360°.

Thus Sunday was given to *three* distinct modes of calendaring the week on this typical dialling :—

1*st*, As given to a semidiurnal arc of 7 hours, numbered also as days and weeks of 7 days, completing the Jewish Pentecostal cycle of 7 × 7°, substituted for the Divine age of 50, on the western side steps of the Greek-Egyptian Dial with steps. This seems to have symbolised *the week of* 7 *days*, beginning with Sunday and ending with Saturday, to the golden age of Saturn's reign, before that of *Jupiter*, in the cycle of 5 days. For they typically dedicated *Thursday* to *Jupiter* as the fifth day from Sunday when substituting for their two lunar cycles of 7, 3 of 5 days, as Enoch did. This they did to harmonise the semi-lunar year of 140 days with that of 150 days.

2*d*, As given to the image of the Ephesian Diana, or the Moon coming down from Jupiter on the meridian of their dialling. *This they symbolised to the new Moon for the darkening of their lunar heaven at noon-day.*

This will be made clear by comparing the *Ox-ford* symbolism with the typical position of Taurus on the zodiac of Tentyra, which measures (by the figure of OSIRIS extending from tropic to tropic) the beginning and end of typical time. That image associates *the golden head* of its idolatrous glory with the kingdom of Babylon in Nebuchadnezzar's day, and *makes the feet and toes, part of iron and part of potters' clay,* symbolise the predicted end thereof. This they typically gave to the division between the evening and morning hours of the day (as their dividing of typical time) on the east and west typical dialling of those times. (Compare Zech. xiv. 6 to 9). By this measure of 40° to Sunday, on the Hindu zodiac, they seem to have given the 8 central hours of the Polar Equinoctial Dial on the steps (viz. from viii. A.M. to iv. P.M.) to the Egyptian week of 8 days, harmonised with the five days' cycle of Jupiter, as 5 weeks of 8 days, equal 8 of 5 days, *numbered to a Divine age of* 40 from a basis of 4 for the dividing of time in the Egyptian week of 8 days.

Thus the calendarium for the centre of the steps, on this Dial, would be as that on the ham-shaped Dial, viz., *one* for the cycle of 5 days numbered to Jupiter. This they seem to have reckoned as

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[*] Hence, perhaps "The forty years long was I grieved with this generation," etc., may have a reference to their Baalistic idolatry, analogous to that in Acts vii. 43, to the Remphan or Janus of the Oriental idolators, being made an object of Divine worship by the Israelites in the wilderness, like the calves of Aaron's making. (Exod. xxxii. 4 ; Acts vii. 40.)

5 × 8° reduced to 5 × 6° for the lunation of 30 days given to the small hour-circle on the centre of the steps, for six monthly circuits of the Sun between tropic and tropic, compared with six weekly cycles of 5 days, beginning with Thursday and ending with Monday.

3d, For the calendarium of 7 days on the eastern side steps of the Dial. This typically dates the retrograde movement of the shadow, for the afternoon, as beginning on a calendarium for the 7 morning hours of the Sun's day, as again given to the week of 7 days from Sunday to Saturday.

These two forms of the calendarium seem to explain why Thursday is numbered 2, as second from the Sun on that Hindu zodiac, which does not reckon Sunday in its weekly cycle of 8 days, whilst Monday is reckoned second from Sunday on that which numbers Sunday as one in a weekly cycle of 9 × 40° = 360°.

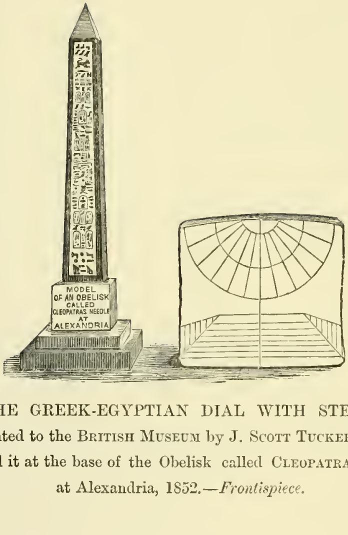
Thus the steps of the Greek-Egyptian Dial, when added to the hollow semicircular Dial of the ancient Babylonians, invented by Berosus, represented the Polar Equinoctial day of 10 hours (as 10 × 14° compared with 10 × 15° on the equinoctial) divided into *three typical parts* for three forms of the calendarium by which they measured *the idolatrous span of their typical and prophetic time by a full-length statue of OSIRIS the Potter*, from his head of gold to *his feet and toes of iron and "potters'" clay*, like that of the MITHRAS D'ARLES, reducing the old semicircular measure of the Sun's half-yearly circuit from tropic to tropic to one limited by the quadrant of 90°, from ♎ to ♋. For by this the height of the steps is to be regulated when adding a calendarium to the old semicircular dialling for a day of 12 hours.

This is confirmed, moreover, by the fact that the form of the semicircular Dial subtended by steps in the illustration to Knight's Gallery of Arts, *gives no side steps,* and must consequently have been constructed only for *one (the central) form of the calendarium.*

The Alexandrine, or Greek-Egyptian, form of the ancient oriental dialling with steps (by dividing the steps to *three forms of their calendarium*), proves the identity of *this symbolism for their cycle of typical and prophetic time* with that *prophetically* condemned in Daniel's interpretation of Nebuchadnezzar's dream from the beginning to the end thereof. Our attention is thus recalled to the typical structure of the three small pyramids which confront the great pyramid; and the other three of a similar character, which confront the third, and smallest of the large pyramids, making a cluster of *nine* typical pyramids in the Plain of Ghizeh. The middle of the *three* in each case seems to identify the central pyramid of Cheops' daughter (the two sides of which symbolise a measurement of 150 feet each to two chords of 150° on the equinoctial, dividing between the lunar year of 300 days, and the old solar year of 360 days) with the Moon as Diana of the Ephesians coming down from Jupiter on the centre of their Dial. But the Diana of this reference was one with the idolatrous symbolism for Durga, between Ganesha and Kartikeya, compared with that of Subhadra, between Juggarnath and Bala Rama.

But considering *the* 10-*hour day* of the Polar Equinoctial Dial on the steps as divided to three forms of the calendarium (viz., two weekly cycles of 7 days on the side steps, and one of *five* days, as that of Jupiter, given to the conjunction of the Sun and Moon on the meridian of the Dial), we have a symbolism extending over a lunar and typical cycle of 19 days. This they seem to have substituted for the Golden Age of 20 days by which Enoch divided the lunation of 30 days *into* 20 *days of light given to the Man in the Moon* (OSIRIS the "*Potter*," on the Egyptian Zodiac of Tentyra), *and* 10 *days of comparative darkness, represented by the feet and toes of this Mithraic image.*

These 19 days, reckoned typically and prophetically as years according to the usage of the ancient Orientals, represent the celebrated lunar cycle of Meton, the ancient Grecian astronomer, whose cycle is retained in our own ecclesiastical calendar, *as that of its golden number*, for a harmony of solar and lunar time.



THE GREEK-EGYPTIAN DIAL WITH STEPS,
Presented to the British Museum by J. Scott Tucker, Esq.,
Who found it at the base of the Obelisk called Cleopatra's Needle,
at Alexandria, 1852.—*Frontispiece.*

THE
HEBREW AND GREEK SCRIPTURES,

COMPARED WITH

ORIENTAL HISTORY, DIALLING, SCIENCE, AND MYTHOLOGY.

ALSO,

THE HISTORY OF THE CROSS,
GATHERED FROM MANY COUNTRIES,

BY THE LATE

REV. WILLIAM HEWSON, M.A.,
VICAR OF GOATHLAND.

LONDON:
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WHITBY: HORNE AND SON. WIGTON: M'MECHAN.
EDINBURGH: W. OLIPHANT AND CO.; ANDREW ELLIOT.
1870.

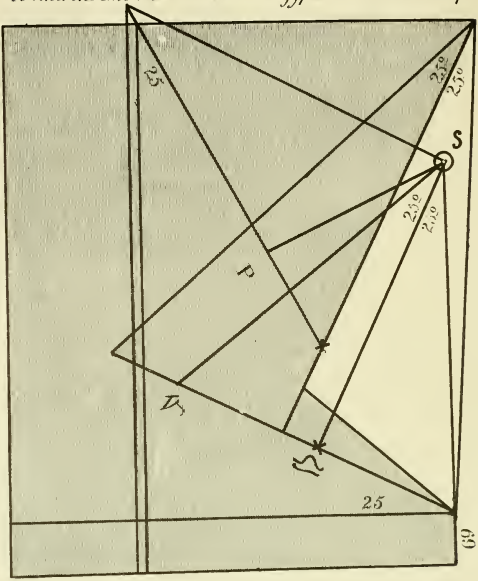
PREFACE.

It is confidently hoped that the reader of these pages will pardon any misplaced illustrations, or other defects, as many difficulties arose in completing the publication of these Tracts.

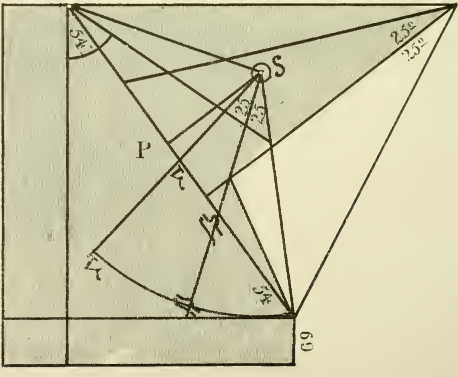
The beloved Author died after only a few days' illness, on the 23d of last April. The tracts are the result of more than twenty years study of ancient history, and were written with a view to help in translating the Hebrew Scriptures. The Author considered the scepticism of present times to be the result of ignorance. The illustrations may now be of more than usual interest to the public, as some are of Roman sculpture, the originals of which were lost to the world in the French Revolution of 1793: they are selected from rare old French woodcuts of that date. The clock at Strasburg will form a curious link in the history of the Dial; it was chosen by the Author as a proof that science and history had for many generations been taught by the Church, and are aids to Faith, *when* viewed by a devout mind. It is with the earnest hope of realising his wish that these papers are now offered to the public by his daughter.

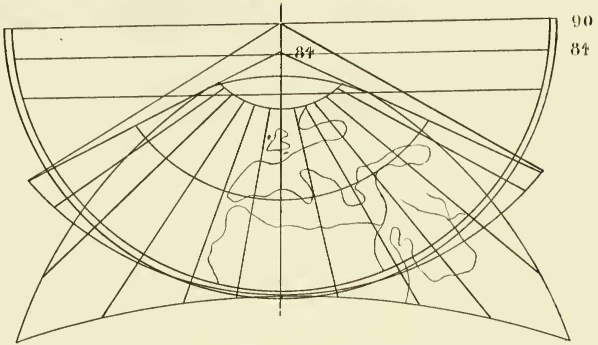
WHITBY, *October* 1870.

To find the Gnomon of the Greek Egyption Dial with steps.



To find the Gnomon of a Dial with Steps,
for Whitby, N. Lat 54.°

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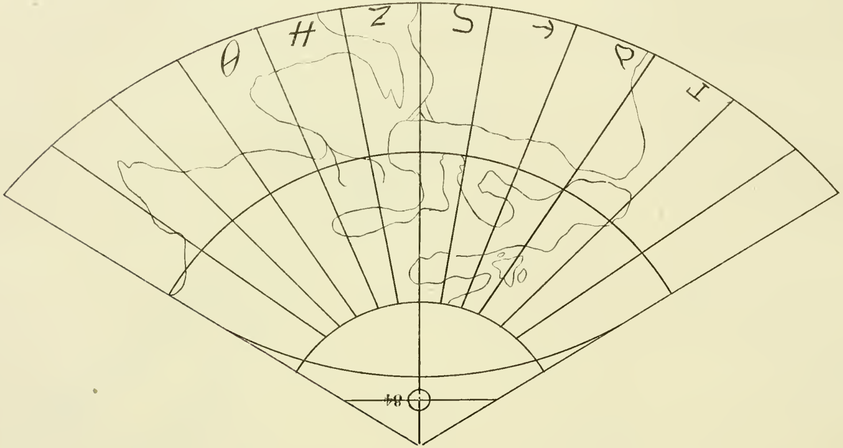Θ
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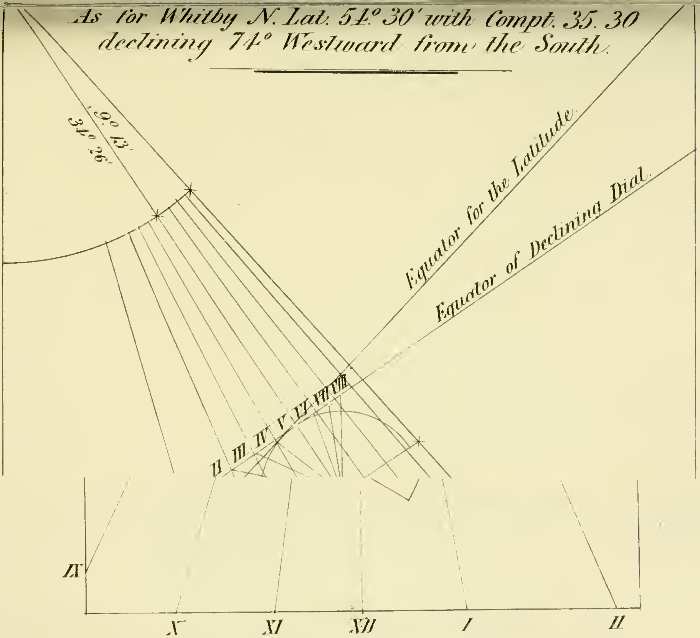
The Dials at
Sleights' Church:
No. 1.

Dated 1761.



As for Whitby N. Lat. 54° 30' with Compt. 35. 30
declining 74° Westward from the South.

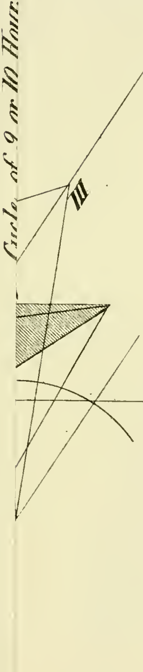
UT UMBRA SIC VITA.

"Man's day" – as a passing shadow: – "the vapour" of James IV. 14: John XI. 9. Matt. XX. 1: 6.

To 5

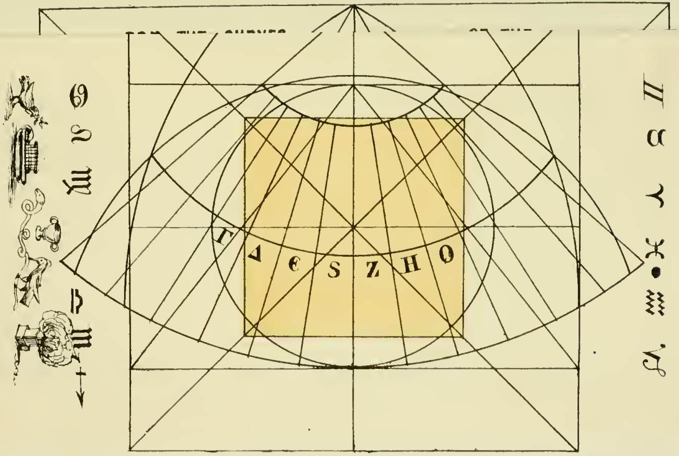
Add 9 Hours.

14 x 26 = 364 for a Cycle of hours answering to the days in Enoch's Solar Year:



Vertical of an upper inclined East Dial as the Horizontal of a Declining Dial. _ Compare Bedos & Celles, P. 196. & Plate XX.

The shaded part represents the base of the Dial when standing *vertically*, for a bird's-eye form of the front view.



From the Model made for the Industrial Exhibition in 1866. The coloured square represents the relation of their four-square City of Light to the equinoctial of an East and West or Polar Dial.

October 11 1882.
Glanced through this quaint
Incomprehensible paper.
after working my own
devices. for some years. —
I cannot make out
what the writer was
at —. Every thing that
Casts a Shadow is a
Shadow dial. and
the Shape of it may
be founded upon Great
Mathematical knowledge
or *Not*. It may or may
Not symbolize Solar
Worship.. It may simply
measure time of the
Seasons by *Shadows*
I am simply after *Light*
J.T.R.